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ON INDIA GOVERNMENT SERVICE

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Prof. K.S.Krishnan, D.Sc., F.R.S.,  
Director, National Physical Laboratory  
of India,  
c/o National Academy of Sciences,  
2101 Constitution Avenue,  
WASHINGTON - D.C.  
(U.S.A.)

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Sender's name and address:—

S. L. Malurkar Esq.,  
Director, Colaba and  
Alibag Observatories,  
Colaba, Bombay 5,  
(India)

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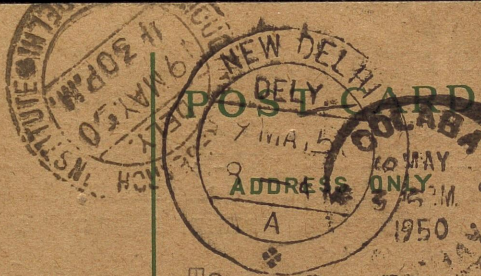
(Copy of D.O. No. T-4415/47-D-11 dated 18th April 1955 from B.L.Gulatee Esq., Director, Geodetic & Research Branch, Survey of India, Dehra Dun to S.L.Malurkar Esq., Director, Colaba & Alibag Observatories, Colaba, Bombay 5)

Many thanks for your D.O. No. 775/ECL. dated 6th Apr. 1955.

The Geological Department have an Askania Gravimeter, but I am not sure if they are equipped with the automatic recording device.

While I fully endorse your views about the desirability of observations of g variations along the track of the eclipse, I am sorry that I have not got the resources to put them into effect. I doubt, if the Geological Department will undertake to do the work.

-----  
Copy to Dr. K.S. Krishnan  
of the resources of the geological dept. for  
my cable by anti of him  
I have no idea  
S. Malurkar  
24/4/55



To  
Dr. K. S. Krishnan, Kt., F.R.S.

Director  
National Physical  
Laboratory.  
New Delhi.

May I remind for the return of Waller's thesis on "Interference and diffraction of X-rays" which I gave you in 1945. On enquiry at Dr. S. Venkateshwaran's place last year, I found that a copy for me of the same had not been left. I should be grateful if the book may be returned to me by return post. with kind regards

*S. L. Malurkar*  
(S. L. Malurkar)

May. 19th. 1950

*C. K. B. Observatory  
Bombay*

Personal.

No 1880

Colaba Observatory, Bombay. 5  
Aug. 29th. 1953.

Dear Prof. Krishnan,

In continuation of my letter of Aug. 19th to you, I am enclosing the copies of the abstract which I prepared 1) to be sent to the Director-General and the other to be used by myself. There was some strong reason for this procedure. As I had just delved into the question of Ozone, after sending the whole abstract; it was quite likely that I would be told in a subsequent letter that it was interesting to note that I had also come to the same conclusion as already known to some one higher up. This had occurred several times to me earlier and even on Ozone in Mar. Apr. 1946, I had received several letters which would have justified my fears. Even after publication of the preliminary note in Curr. Sci. in Oct. 1946, attempts have been made to detract my credit. In fact I have a suspicion that the whole paper was suppressed so that certain statements may not see the light of day. After a long time it can be said that the paper is old.

In my own opinion, I feel bringing reference to K. Aichi's work (mentioned by Lord Rayleigh in his collected works V) of 1907 the work done by Rayleigh in 1916, the historical development is placed. I am not giving reference to Boussinesq and Benard as Rayleigh has referred to them and I have ref. to in my papers.

Radiation and stability problems have been all taken as a sort of connected set up and a categorical statement is brought about about several formulae for nocturnal radiation and the difficulty of experimental verification. That the various formulae are different approximations is brought out. Again the stability criterion is dependent on the nature of the temperature distribution quite apart from the actual dif. of temperature.

The photolysis of Ozone, the various steps were first given by me. But still in Prof. Mitra's book, the hydrogen needed for Photolysis is imputed to Bates. In fact my way of looking at it was more rational. If the water-vapour content was sufficient to stabilise the temperature according to Dobson by absorbing and emitting long wave radiation, the same argument should be used for its sufficiency for photolysis in the short wave-length region. While in the Gasiot Cttee. report 1943, Bamford had stated that the reactions are not likely to be of importance, since the H content is probably very low, the water-vapour in the layers of the lower stratosphere was taken to be sufficient to produce hydrogen by photolysis. Much before A. B. Meinell's discovery of OH bands in 1950, I had sent the paper to Prof Saha (Mar. 1950) taking OH as a chief reaction.

If at every stage I write something, it gets delayed and later said out of date it is very harsh on me. Except as a ~~drugging~~ <sup>drugging</sup> agent on my spirits, I find no other reason for it. So many of the papers which I had taken trouble have lost credit, including those from atomic dynamics which I sent you in 1933, that I feel I get hardly any credit. It is for this reason that I sent you the article in question to get the situation remedied. When I sent an advance copy of the note on Ozone to Dr. Meinell in July '50 after hearing from Prof. Chapman the former was quite pleased.

If one or two sentences need clarification, I do not mind changing to make them more explicit. It will be an injustice to me to withhold the publication of the paper for any reason or at whosever advice. Hence I would very much request you to let me, very urgently what your reactions are. In fact for work done in India by Indians I should expect that the Indians and Indian Sci. journals should give due prominence, irrespective of what others may say.

with kind regards

Yours sincerely

*S. L. Malurkar*  
(S. L. Malurkar)

To  
Prof. K. S. Krishnan, D. Sc., F. R. S.  
No. 3. Kushak Road.  
New Delhi.

Private

Colaba Observatory.  
Bombay.5. Mar.24th.1959

My Dear Prof.Krishnan,

*u.s.u*  
I am going over to New Delhi by III cl De Luxe train leaving Bombay on 25th. On 26th probably I will go over to our office at Lodi Road, but I shall try to contact you on telephone the same day.

No doubt you would be very busy with various items of work and seeing that the time of the meeting has been changed to 1430 hrs. <sup>on 28th</sup> I am wondering if a point <sup>can be raised</sup> of use of magnetic data at repeat stations on magnetically disturbed days can be used for IGY data as the period coincided with great solar activity

I have not thought much about putting an application for extension yet. But I shall have to do it soon. Dr. A. K. Das has got the third year of extension. Unfortunately the scientific fraternity itself is silent about the return it gets for its initial equipment and cost of training. After spending years and money, the scientist has to start below the one selected just after passing the degree in any scale and serve a lesser number of years without having had the prospect of even having a glimpse of the top (Dr. Banerji and Dr. Ramanathan can be excluded as they had a bit of luck). While it is all in the game, in the public sector where inevitably there is seniority, the person who can and often does the delivery of goods is badly off and the Official dalal gets the kudos. In your capacity as in the Sci. Panel of III five year and National Dev. C. you can remedy, if you are interested.

I learnt that Drs. Thacker, Bhabha and you are a filtering committee even for persons who may like to get a job outside India in Physics, and that you do by mutual consultation.

If it is so, what are my prospects? Would people stand in the way of my even attempting to get something outside let alone in this country. Perhaps you have to consult your friends. Pl. let there be a distribution where I can also partake. The D.G.O. will invariably get in when any of the scientific awards for good scientific work has to be given.

I hope you are keeping quite fit and active  
with best wishes & with kind regards

Yours sincerely

*S.opalashu*

No. 154  
From  
S.L. Malurkar. M.Sc (cantab).  
FNI.  
Director. Colaba and Alibag  
Observatories. Bombay. 5.

To  
The Chief Editor  
JSIR. Old Mill Road. New Delhi.

Dear Sir,

I have had an opportunity to have a glimpse of your journal vol. 17A No. 12. Dec. 1958 (60th birthday volume of Dr. K. S. Krishnan)

I had been asked to contribute my share in rendering my homage to the distinguished Physicist of India with international fame. I sent two articles one on the Geomagnetic Observatories of Alibag, Annamalainagar and Trivandrum and another on Solar Control of some unusually remarkable geophysical phenomena.

I am very sorry to note that if space was limited (which was not indicated in the original letter) instead of returning the articles to me they have been badly presented. In the first, where the India Met. Dept. has taken such a lot of trouble and has had world wide recognition for the continuity of work, the importance of the stations has been blacked out and not a single diagram or photograph has been printed.

In the second article an original contribution which I thought was fit as a tribute on such an occasion, it has been distorted out of shape that no possible errata can give a semblance of the work put in and the results enunciated. I would request you to add an addendum in your next issue of the journal. "The article by Mr. S. L. Malurkar on "Solar Control of some unusually remarkable geophysical events" 17.A69 (1958) has due to some reason appeared which does not exactly represent his own results and may be considered/withdrawn so that it may be printed elsewhere". Long ago in the Indian Mathematical Society, the matter was recomposed and printed "On asymptotic expansions..." by me.

Thank you. I am sorry to have to send this communication, but an article where the shade of meaning has been changed does not help me.  
Jan. 15, 1959.

Yours Faithfully

Copy to Dr. K. S. Krishnan, Mt. Z. Rd.  
A. F. N. Ac. Sc.  
No. 3. Kashi Road  
New Delhi.

(S. L. Malurkar)

Colaba Observatory.  
Bombay.5. Jan.15.1959.

My Dear Dr.Sastry,

*Ref No 759/Pub - 3/4 (A-170)/58*

I am thankful to you for your letter dated Jan.5.'59  
re: the two articles which I sent for the 60th Birthday volume ~~in~~  
~~xxxx~~ for Dr.K.S.Krishnan.

I am not overful of energy or ideas that the moment  
a letter asking for articles is received, I can send one, or more. The  
letter head of the IGY National Cttee <sup>had</sup> ~~was~~ Dr.K.S.Krishnan and signed  
by the Secretary. Was it intended that I should have ignored the letter?  
It would have been discourtesy to the ~~xxxx~~ Great Scientist involved.  
As members of the National IGY committee, I thought I should put in  
extra effort to contribute something. While my respect to the scientist  
is there, it does not mean that I have to allow myself to be talked at  
which reflected badly ( even as a Govt. servant in a semi-Govt. publica-  
tion) on my understanding, or capacity to contribute.

It was upto the body to have sent back the articles  
on the ground that they did not conform to the steering committee's  
ideas. I have some experience of handling invited articles also in my  
life. The appended <sup>note</sup> seems an after-thought, and with due apology  
naive. To say that most of the sentences are from the words used by me  
I would quote the classic example of "Aswathamo hatha kunjara" by  
Dharmaraja and a part which was heard by Drona meaning an entirely  
distinct meaning. I need not quote the Pelopponesian parallels. But  
having published the articles in a form which gives the wrong impression  
I am prevented from getting publicity to the ideas put forward while  
so many people who are working on the subject have had access to the  
ideas.

In the programme meant for IGY, special stress was  
laid to intensify work in the disciplines in which the departments were  
engaged and few if any were instruments set up ~~xxxxxx~~ outside field  
stations. Even there, I had sent diagrams of structures at Annamalai-  
nagar and Trivandrum which were ~~xxxx~~ originally for IGY only. Pray how many  
articles that are published in scientific literature (I have some ex-  
perience these nearly 40 years) are all things not repeated and brought  
together to make a complete meaning. Else many research papers should  
consist of one or two sentences, which would be absurd. The first part  
of the paper consisted (p.3 Ms bottom para and p.4 contd) the basic  
need for equatorial geomagnetic observations from S.W. India to S. China

Seas as being important for study due to assymetrical effects that should be expected due to the geomagnetic field. I pointed this out in 1954 and gave reference to Simpson's work <sup>(1956)</sup> in a parallel field. The published paper is entirely silent about it. Even among the IGY members quite a few would be freshmen to the geomagnetic work done in India. The article if it has to be a whole has to be briefly argued out to show the exact need for the discipline which has gone on for a hundred years and which had to be intensified during the IGY. To say that the observatory at Alibag was not installed for IGY nor its instruments shows a lack perspective. Are the photographs of instruments and diagrams for other articles being published for the first time and only in this journal? I have had access to some research papers and this will not bear scrutiny. I consider that the Journal needlessly has tried to belittle the branch of work which I represent and a person who has little knowledge in that field has tampered with the article.

Re: 2. Natural Very Large events are not obtained to human order. No journal would have said that it did not pertain to the intensified work in IGY. It is with the experience of historically very large events that during any special phenomenon in the IGY, observations could be completed without having to regret that a particular observation had been left out. The Geophysical phenomena are not to be marked by time barriers. Else, one should forget all experience gathered before the IGY (particularly the Third IGY) and only use the observations of the IGY. This has just to put that way to show its invalidity. Anyway if the editorial board or steering committee really thought (and not an after thought to close my objection), the article should have been returned, to me. I would have published it elsewhere, where I would not have got mutilation. In my letter to Dr. Krishnan clearly shows where the meanings have entirely changed and conclusions distorted. It is plain English. To say that my meaning has not been changed shows that the person has not understood or appreciated the limiting phrases of the conclusion. I can not blame him because the subject has been mine and I have been working intensively. But the regret is, that by omitting important conditions when particular geophysical phenomena occur or not, <sup>skill</sup> the meaning is not changed appears 'a tall claim'. For drawing theoretical conclusions every restrictive clause and modificatory idea has to be taken in. Else

there was no need for the paper as the very large events: dates and occurrences have been published by various authors elsewhere. To put it bluntly, research arises in bringing facts, sometimes remotely placed, together so that a picture is obtained which would help further knowledge. While so doing, it is but necessary and natural to point out how some previous authors have tried to tackle the problem and show the problem has been approached in the particular paper. As it is some one was allergic to mention the name of Simpson in both the articles as I had tried to go a step beyond him and <sup>has</sup> omitted all reference which showed the superiority of my approach. Reference to Minnis and Bazzard (Mar. 8. 1958. Nature. p690) has been omitted where they pointed out "A solar flare usually causes a simultaneous increase in the electron density of the D and E layers of the ionosphere in the day-light hemisphere. It is rare, however, to find any corresponding ~~xxxxxx~~ increase in the F2 layer and the only previously reported case occurred in 1949 during an important flare which was accompanied by an unusually intense burst of cosmic radiation". This could not have been occurring every time of flare a well known phenomena <sup>in Nature</sup> as claimed by Dr. Mitra on Dec. 13. 1958. Or if the first sentence <sup>is</sup> ~~is~~ cut off saying that it is well known, the rest loses the force of the special phenomenon.

So that the letter is complete, I am retyping the phraseology used by me and as printed.

Apart from putting forward an idea, I am sorry that I have been put into needless trouble in having to type all this, an energy better utilisable and have perhaps left <sup>unopened</sup> avoidable differences of opinion, between persons. Perhaps there was some other agency that has not revealed itself. Mere summarising would not have cut out the essentially new statements to appear as matter of fact observations.

with kind regards, I am sorry to point out all this

Yours Sincerely

*S. L. Malurkar*  
(S. L. Malurkar)

Original.

As published.

"The study of the part of the geo-physical phenomena which has its origin and controlled by the sun is desirable and may help in understanding those due to other sources. Simpson, Babcock and Babcock(1955) consider the unipolar magnetic regions on the surface of the sun for cosmic rays with a solar origin. Otherwise the sun has been taken as a uniform surface. The conditions at a possible source like the sun may need some stressing... emission"

omitted.

In the conclusions:

Among the seven events considered above, even in those belts where active regions are found can-not be considered as uniform in the causation of very big events.

omitted and re-  
placed by some  
thing vague:

(1) ....Two small longitudinal sectors, ..... are the areas where solar flares have been observed.

Misleading as a novice would go under the impression that s.f occur only here; while actually what is meant would only have been clear if the earlier part had not been omitted.

(3) With the above two conditions satisfied, the big solar flare near the western limb gave rise only to a cosmic ray burst. Apart from the usual radio fade-outs, in two out of three instances (the F2 layer in the earth's ionosphere) an increase in electron density has been recorded. No data is available in the other one.

Cpsmic ray bursts occur for severe solar flares occurring near the western limb of the sun. Apart from the usual fade-outs, such events are also associated frequently with an increase in electron density in the F2 region of the ionosphere.

The limiting condition underlined here from the original has been omitted giving an entirely wrong impression. The statement from Slough Ionospheric Research station has been quoted from Nature earlier.

(4) But with the same two conditions, the big solar flares in the sector near the Central Meridian gave a cosmic ray burst. In addition, it was followed in about a day by a geomagnetic storm accompanied by ~~XXXXXX~~ corresponding cosmic ray changes

omitted.

After having distorted the special flares in the western limb, those near the C.M. of the sun where some other phenomena are noticed are entirely omitted.